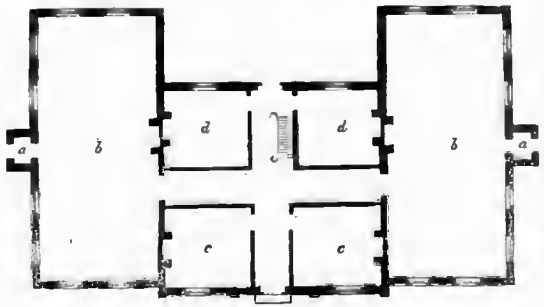
DESIGN FOR SCHOOLS.

ELEVATION.



GROUND-PLAN.

REFERENCES.

a *a*. Lobbies.
b *b*. School-rooms.
c *c*. Sitting-rooms.
d *d*. Kitchens, (with cellars beneath them). Four, five, or six chambers and a closet-room may be formed in the upper story.

(*Scale* 10 *feet per inch.*)

TO THE EDITOR OF THE BUILDER.

SIR,—I herewith forward a design for schools, with a residence in the centre for the master and governess, hoping you may deem it worthy of a place in your paper. The proposed fabric is so arranged that it can be occupied by separate families if so required; it can be built with brick work, having its exterior walls faced with Suffolk bricks, and the cornice and other mouldings run in cement; or it may be of ordinary brickwork, all stuccoed externally.

I repeat, what I stated in a former communication, that I feel deeply interested in the success of your valuable publication, and confident that if your numerous and respectable correspondents, (many of whom possess talent and genius) unite hand and heart, their contributions will enhance its value.

I am, Sir, your most obedient servant,
Brecon, Jan. 21, 1844. Σ.

[We should have so placed the wings of the building containing the school-rooms as that the chimneys, if only one to each room, should fall exactly in the centres of the walls against which they would be built. The domestic arrangement we should have so contrived that the master and mistress if of different families might live separately. In each of the ends of the school-room we should have placed three windows, or one window consisting of one or three bays, lights, or days. The principal external cornice we should have made lighter.—Ed.]

NEW METHODS OF GILDING AND SILVERING BY IMMERSION.

BY M. A. LEVOL.

At the present time, when great attention is being directed to the processes of gilding by the moist method, it seemed to me not without interest to publish an account of some new methods for gilding or silvering by immersion, more especially on account of the facility of their execution.

Gilding on Silver.—Silver is very easily gilt by means of the neutral protochloride of gold, to which an aqueous solution of sulphocyanide of potassium has been added until the disappearance of the precipitate which at first formed. The liquor thus obtained should possess a slightly acid reaction, and if it has lost it, by too considerable an addition of sulphocyanide, it should be again restored by a few drops of hydrochloric acid. In order to gild, the well-cleansed silver is immersed in this liquor nearly boiling and moderately concentrated, in which state it is kept, adding from time to time hot water to replace that which evaporates. In this manner the inconveniences which would result from too great an accumulation of the hydrochloric acid, the presence of which is nevertheless useful in preventing the formation of an auriferous precipitate, which would otherwise take place at the high temperature employed, were the alkali predominant, are obviated.

Gilding and Silvering on Copper, Brass, and Bronze.—A solution of cyanide of gold, and that of cyanide of silver in cyanide of potassium, has been recommended for gilding and silvering under the influence of electric forces. I have found that the same solutions, when at a temperature near their boiling point, may also be employed for gilding and silvering by immersion. Their preparation would be somewhat expensive were it necessary to obtain them chemically pure; but this would not offer the least advantage, and the operation may be simplified and rendered much less expensive by treating either the chloride of gold or the nitrate of silver (both should be neutral) with an excess of cyanide of potassium so as to obtain the soluble double cyanides.

Silver cannot be gilt by this process, but it will be seen above that the sulphocyanide of gold and of potassium gilds this metal extremely well.

The solution of cyanide of copper in cyanide of potassium does not copper silver even in contact with zinc; but it coppers this last metal perfectly, and in a very solid manner.

I may observe in conclusion, that these processes, so advantageous from their always succeeding, and requiring but a few minutes for every preparation, unfortunately do not allow but of the application of a very thin layer of the precipitated metal. This inconvenience is common to all the processes by immersion.—*Polytechnic Review.*

THE DRAINAGE OF THE LAKE OF HAARLEM.

THE determined industry, the phlegmatic perseverance, of the inhabitants of the United States of Holland have been exhibited to Europe by the laborious undertakings which, on every side of Holland, present themselves. Nearly a seventh part of this land has been rescued from the sea; and wherever the traveller is placed he recognises the marvellous barriers that have been formed to prevent its encroachments: he sees an artificial coast, formed from the granite rocks of Norway, dykes, buttresses, constructed with a solidity which seems to promise to resist even time itself. Amongst the objects which have long occupied the attention of the Hollander has been the drainage of the lake of Haarlem, and the conversion of its bed into cultivated land; various projects have at various times been conceived, have been discussed, and, from various reasons, abandoned. A plan, which was considered feasible, was laid before the States General in April, 1838, and great hopes were entertained that the idea which was suggested was one which might easily be carried into execution. After, however, due and careful deliberation, it was abandoned, in consequence of the rejection of a bill brought before the second chamber. At length the government has undertaken the great work, and every prospect is entertained of the successful issue of the enterprise. A vote has been obtained from the chamber of 4,533,333 dollars, but this sum will be by no means adequate to the expenditure that must necessarily be made. It has been ascertained by calculations founded upon the profit obtained by other drainages in Holland, that so large an interest will be returned that a loan of much greater extent may very safely be advanced. The lake of Haarlem is calculated to be about fourteen English miles in its greatest length, and as many in breadth. About 70,000 acres are covered by it, and it has been asserted that every year nearly 250 acres are encroached upon. The depth of the water has been variously estimated, but is supposed to be upon an average twelve feet and three-quarters, and the mass about thirteen and three-quarter millions of cubic roods of water. The manner in which it has been decided to carry out the drainage is as follows:—

A channel is to be formed one hundred and forty-three feet and a half in width, supported on each side by an enormous dyke; into this is to be poured, by means of six steam-engines, each of two hundred horse power, the whole of the water contained in the Haarlem Meer, and three sluices are to conduct it into the German and the Zuyder sea. It is expected that this undertaking, commenced in May, 1840, will be completed in the course of the present year. It is understood that it will be requisite that every spring the power either of steam-engines or water-mills should be called into action, to preserve the rescued land from fresh inundations. Of what Holland is capable an idea may be formed from the recollection that large tracts of land are below the level of the sea, and that not only the safety, but absolutely the existence of the country is dependent upon the dykes, which have been at various times raised up. Near the great dyke of the Helder is the Beemster Polder, a tract of land of upwards of 8,000 acres, over which water rolled uninterruptedly, and where now there exists a healthy, industrious population of 3,000 souls.—*Polytechnic Review.*

Mr. Burgess, the partner of James Walker Esq., engineer, has been at Dover, preparing the plans and specifications for the intended improvements to the outer harbour, and it is reported that tenders for the execution of the work will be advertised for immediately.